

**EXHIBIT A**

**GROFMAN CURRICULUM VITAE**

BERNARD GROFMAN

Professor Grofman received his B.S. in Mathematics at the University of Chicago in 1966 and his Ph.D. in Political Science at the University of Chicago in 1972. He came to the University of California, Irvine in 1976 as an Associate Professor, and became Professor of Political Science in 1980. Since 2001 he has also been an Adjunct Professor of Economics at UCI. He was selected as the inaugural holder of the Jack W. Peltason Endowed Chair in Democracy Studies in 2008. In 2008 he was also appointed for a five year term as Director of the UCI Center for the Study of Democracy, a research center which has more than thirty affiliated faculty from the departments of political science, sociology and economics.

He has published over 300 articles and research notes, including articles in top political science and interdisciplinary journals, with ten in the American Political Science Review. He has co-authored four books published by Cambridge University Press, with a fifth co-authored book from Yale University Press, and has edited or co-edited 23 other books. He has been Principal Investigator or Co-PI on grants from the National Science Foundation, the Ford Foundation, the Rockefeller Foundation, the Sloan Foundation, the Templeton Foundation, the Koch Foundation and other foundations and government agencies totaling more than a million dollars. He was elected chair of the Section on Representation and Electoral Systems of the American Political Science Association in 1993-94, and elected President of the Public Choice Society in 2000-01. Professor Grofman became a Fellow of the American Academy of Arts and Sciences in 2001. In 2010 he received an Honorary Doctorate from the University of Copenhagen for his lifetime contributions to political science in the area of electoral systems and representation. In 2017 he received the American Political Science Association's Charles Merriam Award for distinguished lifetime contributions to public policy, awarded biennially.

Grofman is particularly interested in the intersection of law and social science, especially the role of expert witness testimony and the uses of statistical evidence, and in topics such as voting behavior in the U.S. Supreme Court and jury decision-making. He is one of the world's leading experts in the study of redistricting and voting rights, areas where his own work and books he has edited have been cited by the U.S. Supreme Court in a dozen cases, and by lower courts in scores of cases. He has been an expert witness or litigation consultant in over a dozen states, working with the U.S. Department of Justice, the NAACP, the Mexican-American Legal Defense Fund, and both political parties. He is most often involved in litigation affecting congressional redistricting or state legislative redistricting, but also has been involved in issues re local redistricting (including Boston, New York City, the City of Los Angeles, and the Los Angeles County Board of Supervisors). In the latter case, for example, the map he argued for resulted in the election of the first Mexican-American County Supervisor in over 100 years.

Perhaps most notably, the standard accepted by all courts to define *racially polarized voting*, a key element of all redistricting cases brought under the Voting Rights Act or the 14<sup>th</sup> Amendment, is based on the work he did in 1984 in a North Carolina legislative case, heard by the Supreme Court in 1986 under the name *Thornburg v. Gingles*. In that case Justice Brennan (fn 21) asserted "The [trial] court ... adopted Dr. Grofman's definition — "racial polarization" exists where there is "a consistent relationship between [the] race of the voter and the way in which the voter votes," Tr. 160, or to put it differently, where "black voters and white voters vote differently." *Id.*, at

203. We, too, adopt this definition of "racial bloc" or "racially polarized" voting." Moreover, the methodology proposed by Grofman for detecting and measuring *racially polarized voting*, also endorsed in the *Thornburg* Opinion, has been the basis of expert witness testimony in voting rights cases for the past 30 years, and represents an application of social science to law that has had a durable impact.

Grofman has been a consultant to federal courts on five different occasions. In 2015 he was chosen as Special Master to assist a three federal judges in the redrawing of Virginia CD3 after that district had been declared unconstitutional. The redrawn map he proposed to the court, which limited changes to CD3 and four other districts, was used for the 2016 election, and resulted both in the end to racial gerrymandering in that part of the state and in the reelection of the African-American representative in CD3. Most recently, in 2017, he served as a Special Master in a federal redistricting lawsuit involving Native American voting rights in San Juan County, Utah. In other recognition of the work he has done in law and social science, he was invited to be a visiting scholar for one quarter at New York University Law School in both Fall 2006 and Fall 2010, and he spent the academic year 2012-13 as a Straus Fellow at NYU Law School.

Among his most important work in the areas of voting rights and civil rights are Minority Representation and the Quest for Voting Equality (co-authored with Lisa Handley and Richard ) Cambridge University Press, 1992; Controversies in Minority Voting: A Twenty-five Year Perspective on the Voting Rights Act (co-edited with Chandler Davidson), The Brookings Institution, 1992; The Quiet Revolution: Minority Voting Rights and Representation in the South (co-edited with Chandler Davidson), Princeton University Press, 1994; Race and Redistricting. Agathon, 1998; and The Legacy of the Civil Rights Act of 1964, University Press of Virginia, 2000.

In addition to working on issues concerning race and redistricting, Grofman has also done major work on partisan gerrymandering. This topic is explored in various law review articles and in Representation and Redistricting Issues (co-edited with Arend Lijphart, Howard Scarrow, and Robert McKay), Lexington Books, 1982; and in two other edited volumes, Political Gerrymandering and the Courts, Agathon Press, 1990, and Redistricting in Comparative Perspective (co-edited with Lisa Handley) Oxford University Press, 2008. In the past dozen years, Grofman has been a co-author of five Amicus Briefs to the U.S. Supreme Court, three of which are explicitly about partisan gerrymandering. In particular, the model for measuring partisan bias proposed in an Amicus Brief done jointly with Gary King (Harvard University) attracted favorable notice from several Supreme Court Justices in *League of United Latin American Citizens v. Perry*, 548 U.S. 399 (2006). He is presently following up that work with a new essay looking at the potential role of state courts in curing partisan gerrymandering.

Much of Grofman's work has been in interdisciplinary areas, such as law and politics, and Public Choice. In particular, Grofman is a pioneer in the study of *behavioral social choice*: the use of mathematical tools to develop statistically testable models of collective behavior and individual and group information processing and decision heuristics applicable to real world data. While most of Grofman's work has been about the U.S., he has also written extensively on comparative politics, drawing on data from diverse sources including Western Europe, and Japan and small island nations on the Pacific Rim. Here he has written on topics such as the impact of electoral rules, the shaping of political party strategies, and models of cabinet coalition formation and dissolution. Currently he is working on comparative politics

and political economy, with an emphasis on viewing the United States in comparative perspective, and on comparing economic and political models of competition.

His other co-authored books are A Unified Theory of Voting (co-authored with Samuel Merrill), Cambridge University Press, 1999; co-authored with A Unified Theory of Party Competition: A Cross-National Analysis Integrating Spatial and Behavioral Factors (co-authored with James F. Adams and Samuel Merrill III), Cambridge University Press, 2005; Behavioral Social Choice (co-authored with Michel Regenwetter and others), Cambridge University Press, 2006; and A Different Democracy: American Government in 30 Nation Perspective (co-authored with Stephen Taylor, Matthew Shugart and Arend Lijphart), Yale University Press, 2015. Other edited or co-edited books include: Choosing an Electoral System (co-edited with Arend Lijphart), Praeger, 1984; Electoral Laws and Their Political Consequences (co-edited with Arend Lijphart), NY: Agathon Press, 1986; Information Pooling and Group Decision Making (co-edited with Guillermo Owen), JAI Press, 1986; 'The Federalist Papers' and the New Institutionalism (co-edited with Donald Wittman), Agathon Press, 1989; Information, Participation and Choice: 'An Economic Theory of Democracy' in Perspective, The University of Michigan Press, 1993; Legislative Term Limits: Public Choice Perspectives, Kluwer Academic Publishers, 1996; Elections in Japan, Korea, and Taiwan under the Single Non-Transferable Vote: The Comparative Study of an Embedded Institution (co-edited with Sung-Chull Lee, Edwin Winckler, and Brian Woodall), University of Michigan Press, 1999; Elections in Australia, Ireland and Malta under the Single Transferable Vote (co-edited with Shaun Bowler), University of Michigan Press, 2001; Political Science as Puzzle Solving, University of Michigan Press, 2002; The Evolution of Electoral and Party Systems in the Nordic Nations (co-edited with Arend Lijphart), Agathon, 2003; Duverger's Law in Canada, India, the U.S. and the U.K. (co-edited with Andre Blais and Shaun Bowler) Springer, 2009; The Wit and Humor of Political Science (co-edited with Lee Sigelman, Kenneth Newton, and Kenneth J. Meier) American Political Science Association and European Consortium for Political Research, 2010; A Natural Experiment on Electoral Law Reform: Evaluating the Long Run Consequences of 1990s Electoral Reform in Italy and Japan (co-edited with Daniela Giannetti) Springer, 2011; and In Situ and Laboratory Experiments on Electoral Law Reform: French Presidential Elections (co-edited with Bernard Dolez and Annie Laurent), Springer, 2011; The Internet and Democracy: Voters, Parties, Interest Groups, and Social Movements (co-edited with Alex Trechsel and Mark Franklin) Springer, 2013; and Election Reform in the United States after Bush v. Gore (co-edited with Alvarez, Michael) Cambridge University Press, 2014. He is also a co-editor of the forthcoming Oxford Handbook of Public Choice (Oxford University Press, in two volumes) and he is also co-editor of the planned Oxford Handbook of Electoral Persuasion (Oxford University Press, in progress).

In addition to time spent NYU Law School, in political science, Grofman has been a visiting professor or scholar at numerous leading institutions in the U.S. and internationally: an invited Scholar-in-Residence at the Brookings Institution in Spring 1984; a visiting professor of political science at the University of Washington in 1985 and at the University of Michigan in 1989; and a Fellow at the Center for Advanced Study in the Behavioral Sciences, Stanford in 1985-86; as well as a visiting (assistant) professor at the University of Mannheim (Germany) for three months in 1973; a visiting professor at Kansai University, Osaka (Japan) for one month in 1990; at the University of Bologna (Italy) in 2001; at the Berlin Science Center (Germany) for one month in

2002; at Pompeu Fabra University, Barcelona (Spain) for one month in 2003, and as Political Science Guest Scholar at Nuffield College, Oxford University (UK) for one month in 2008 and 2013 and for two months in 2016 and for shorter periods in 2017 and 2018. . In addition, in political science, he has been a visiting scholar for short periods at other leading research universities: Institute for Advanced Study, Vienna (Austria), U. Victoria (Canada), the University of Copenhagen (Denmark), U. Konstanz (Germany), the Central European University, Budapest (Hungary), U. Tilburg (the Netherlands), and Carlos III University, Madrid (Spain). Also, Grofman has been a visiting professor of economics for one month to three months appointments at the University of Paris, II (France) in 2007, 2008 and 2009, and he has been invited to other departments of economics for shorter visits: the University of Caen (France) in 2014, and Complutense University in Madrid (Spain), in 2015.